Synthesis visual speech using modified polynomial motion curve

ABSTRACT

Composing animations using motion path that based on polynomial function is usually refused by animators. This is because of inability of the lower order polynomial function to produce lengthy motion curve. On the other hand, higher order polynomials function produces unpredictable and undesired shape of curve which is too curvy and unstable. But, polynomial curve is adaptable, where it can easily apply on any lips model regardless of the model size. Therefore, this paper presents a technique to modify high order polynomial curve to synthesis visual speech. We discuss every steps involve and all equations used. The steps later on presented in a form of an algorithm to generate the lips motion. Technique used successfully made the lips model synthesized isolated utterances of digits in Standard Malay language. As a result, the Correlation Coefficient computed shows that both synthesized and actual lips motions are highly likely to be similar.

Keyword: Motion path; Polynomial; Visual speech synthesis; Lips animation